

What is claimed is:

1. A method of delivering a substance to targeted tissue comprising the steps of:
delivering a plurality of magnetically responsive particles which are carrying the substance and have a hydrophobic coating into the patient's vasculature upstream of the targeted tissue; and
applying a magnetic gradient in the vicinity of the targeted tissue to draw the magnetically responsive particles against the wall of the patient's vasculature in the vicinity of the targeted tissue, to allow the substance on the magnetic particles to migrate through the wall of the patient's vasculature to targeted tissue.
2. The method according to claim 1 wherein the step of delivering the particles into the patient's vasculature comprises navigating the distal end of a catheter to a point in the patient's vasculature that is upstream of the targeted tissue, and ejecting the particles from the catheter.
3. The method according to claim 1 wherein the step of delivering the particles into the patient's vasculature comprises navigating the distal end of a guidewire to a point in the patient's vasculature that is upstream of the targeted tissue, advancing the distal end of the catheter over the guidewire, and ejecting the particles from the catheter.
4. The method according to claim 1 wherein the magnetically responsive particles are less than about 20 nm in diameter.
5. The method according to claim 1 wherein the magnetically responsive particles are less than about 10 nm in diameter.
6. The method according to claim 1 wherein the magnetically responsive particles have an average diameter less than about 20 nm in diameter.
7. The method according to claim 1 wherein the magnetically responsive particles are less than 10 nm in diameter.

8. The method according to claim 1 wherein the magnetic particles have an average largest dimension of less than 40 nanometers.
9. The method according to claim 1 wherein the magnetic particles have an average largest dimension of less than 25 nanometers.
10. The method according to claim 1 wherein the magnetic particles comprise magnetite.
11. The method according to claim 1 wherein the magnetic particles comprise a barium iron oxide.
12. The method according to claim 1 wherein the magnetic particles comprise a radiopaque material.
13. The method according to claim 1 wherein the hydrophobic layer is about 10 nanometers thick.
14. The method according to claim 1 wherein the hydrophobic layer is about 5 nanometers thick.
15. The method according to claim 1 wherein particles include a less hydrophobic layer under the hydrophobic layer, wherein the hydrophobic layer is at least partially removable; and further comprising the step of at least partially removing the hydrophobic layer after the particles are at the delivery site to facilitate the release of the substance.
16. The method according to claim 1 wherein particles include a hydrophilic layer under the hydrophobic layer, wherein the hydrophobic layer is at least partially removable; and further comprising the step of at least partially removing the hydrophobic layer after the particles are at the delivery site to facilitate the release of the substance.
17. The method according to claim 16 wherein the step of at least partially removing the hydrophobic layer includes allowing naturally occurring proteases to sever the hydrophobic layer from the hydrophilic layer.
18. The method according to claim 16 wherein the step of at least partially removing the hydrophobic layer includes breaking scissile bonds between the

hydrophobic and hydrophilic layers by applying at least one of a chemical agent, thermal energy, electromagnetic radiation, or sonic energy.

19. A magnetically guided carrier composition for carrying a substance, the composition comprising a plurality of particles, each comprising a magnetically responsive core, surrounded by a outer hydrophilic layer and an inner hydrophobic layer.

20. The magnetically guided carrier composition according to claim 26 wherein the hydrophilic layer and the hydrophobic layer are formed by a hydrophilic group and a hydrophobic group joined by a scissible bond.

21. The magnetically guided carrier composition wherein the scissible bond is cleavable upon an increase of temperature.

22. The magnetically guided carrier composition wherein the scissible bond is cleavable upon application of uv light.

23. The magnetically guided carrier composition wherein the hydrophilic group consists of a polyacid.

24. The magnetically guided carrier composition wherein the hydrophobic group consists of a biocompatible hydrophobic polymer.